THE ADULT LEARNER

4

Learning Theory ◄
Characteristics of Adult Learners ◄
Learning Styles ◄
Student Skills for Success ◄

OVERVIEW

Suggested instructional time for this lesson: 2 hours

Introduction

To maximize his or her effectiveness in the classroom, the instructor must understand the principles of adult learning and the various styles in which adults learn. The instructor's presentation must reflect, and constantly adapt to, the styles in which adults learn.

Lesson Objectives

Through group discussion and question and answer sessions, the EMS instructor trainee should be able to:

- Define learning
- Describe the three major learning theories
- Describe four characteristics of adult learners
- Create auditory, visual, and kinesthetic learning activities
- List 5 study skills
- List 5 test-taking skills

Materials Needed

- Overhead projector and screen
- Overhead projector markers
- Flipchart and markers
- Appendix B

Instructional Strategies

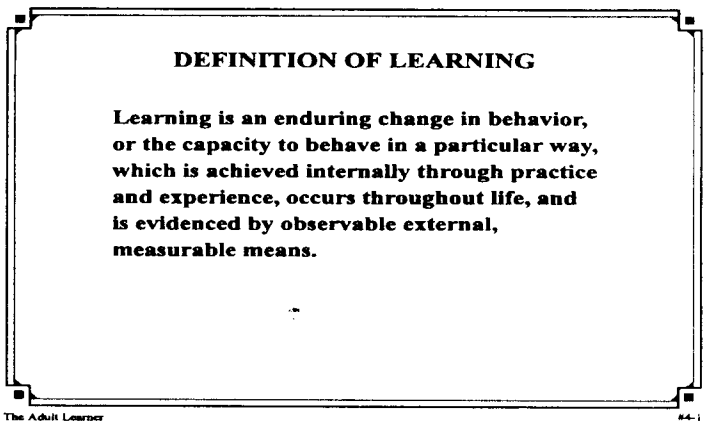
- Lecture
- Discussion
- Question and answer
- Visual aids

PARTICIPANT NOTES *LESSON PLAN*

Lesson Objectives

I. Learning

A. Definition



B. Conditions for learning

1. Previous experience
2. Attitude\Motivation
3. Stimulus

ADDITIONAL INFORMATION

I. Learning

A. Definition

There are many different definitions of learning. Although these definitions do not say exactly the same thing, there are certain core elements that should be part of any definition of learning. Learning:

- is a lasting change in behavior
- results from practice or experience
- is the capacity to behave in a particular manner
- occurs throughout life
- is an internal change that is measurable externally.

B. Conditions for learning

The degree to which behavior changes depends on several conditions. The first condition is previous experience. Are the prerequisite skills and knowledge in place so that learning can occur?

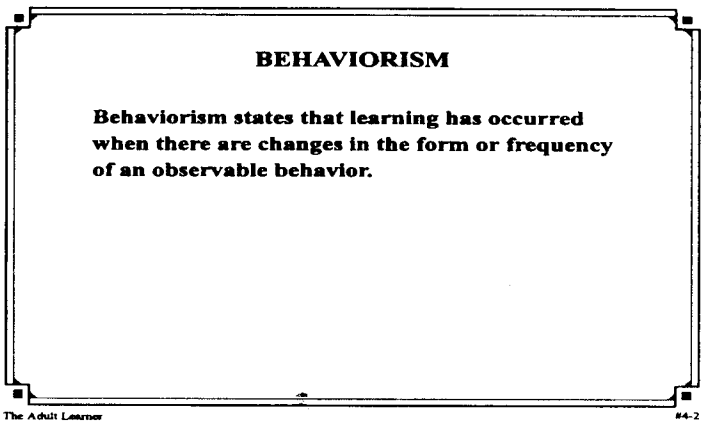
The second condition is attitude or motivation to learn. Learning will occur to the degree a person wants, or has incentive, to change his/her behavior. This is generally not a problem with educating adult learners because they choose to participate for specific reasons, e.g., job requirement, helping others, civic responsibility.

The third condition is the appropriate stimulus (instructional method) which, when applied, facilitates optimal learning. For example, imagine you are teaching CPR and the instructional strategy is lecture supported by a "how to" pamphlet, but no "hands on" experience. Your instruction probably will be less effective for first time CPR students than an instructor whose instructional approach includes practice with a mannequin. Cognitive knowledge as well as psychomotor skills are critical to the proper administration of the CPR technique. CPR training is more effective when participants are able to practice the process and procedures.

PARTICIPANT NOTES *LESSON PLAN*

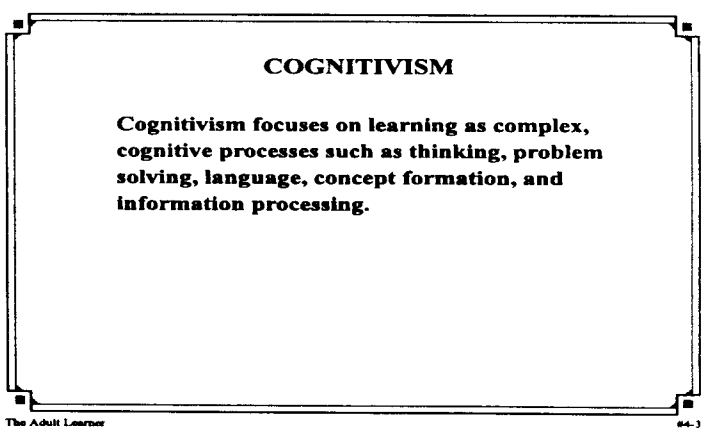
II. Learning Theories

A. Behaviorism



1. How learning occurs
2. Factors influencing learning

B. Cognitivism



ADDITIONAL INFORMATION

II. Learning Theories

There are three major learning theories in education today: behaviorism, cognitivism, and constructivism. It is important for an instructor to have a general understanding of what these theories are, and how they relate to instruction and/or preparation for instruction. Specifically, as an EMS instructor, you will be teaching a wide range of knowledge, skills, and abilities. Knowledge of learning theories will help you to understand how and why learning occurs differently for different types of tasks and people.

Generally stated, a learning theory is an organized set of concepts, principles, and strategies that explains the process of learning and methods to facilitate learning.

A. Behaviorism

Behaviorism states that learning has occurred when there are changes in the form or frequency of an observable behavior.

1. How learning occurs

Learning occurs when the appropriate response is performed after a specific stimulus has been applied. Behaviorism focuses on the association between the stimulus and the response, and how that connection is made, strengthened, and maintained. The classic example of behaviorism is that of the scientist Pavlov's dog. Pavlov rang a bell each time he fed his dog. After awhile, the dog would salivate (response) just from hearing the bell (stimulus). An EMS example would be the increase in heart rate and adrenalin in response to a siren.

2. Factors influencing learning

The learner, the environment (factors and conditions), and reinforcement influence how we learn. The most important of these factors is the environment, and how stimulus and reinforcement for correct performance are arranged within it.

B. Cognitivism

Cognitivism focuses on learning as complex cognitive processes such as

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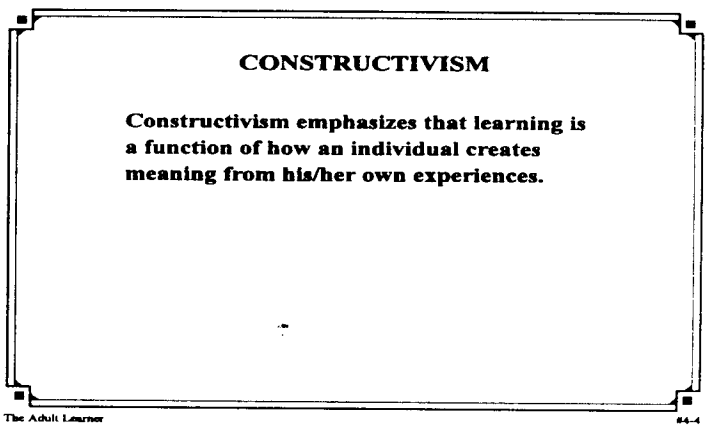
1. How learning occurs
2. Factors influencing learning

C. Constructivism



1. How learning occurs
2. Factors influencing learning

thinking, problem solving, language, concept formation, and information processing.

1. How learning occurs

   Cognitivism focuses on the acquisition of knowledge and the internal mental processes that facilitate learning. It also stresses the importance of how information is received, organized, stored, and retrieved by the mind.

2. Factors influencing learning

   Like behaviorism, cognitive theory stresses the role of the environment in learning. Explanations, demonstrations, and examples all aid in the acquisition of knowledge. For learning to take place, participants must be active in the learning process. The difference between the two theories is that cognitivists believe that learning occurs because learners are attending to and perceiving significant features of the modeled behavior; not simply stimulus → response, as in behaviorism.

C. Constructivism

Constructivism approaches learning and understanding from the view point that knowledge is a function of how an individual creates meaning from his/her own experiences.

1. How learning occurs

   Both constructivism and cognitivism view learning primarily as a mental process; however, constructivists believe that individuals filter information from their environment and create meaning by relating the information to past experiences. For example, people can interpret information differently.

2. Factors influencing learning

   The learner, the environment, and the specific interactions between these two factors influence whether learning occurs. The learner's past experience also plays a role in how he/she interprets new stimuli or situations. Like cognitivism and behaviorism, constructivism emphasizes demonstration, examples, and practice; however, constructivists believe demonstrations are critical to making the learner's experiences realistic and relevant.

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D. Learning theories change focus

E. Activity 4.1—Realistic Learning Tasks

1. Break into small groups.
2. Select a reporter and a facilitator.
3. Have fun.

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D. Learning theories change focus

No one theory of learning is necessarily correct. Modern approaches to learning focus on realistic learning tasks that result in improved student performance. Use the points from each of the theories that are most effective for you and your students.

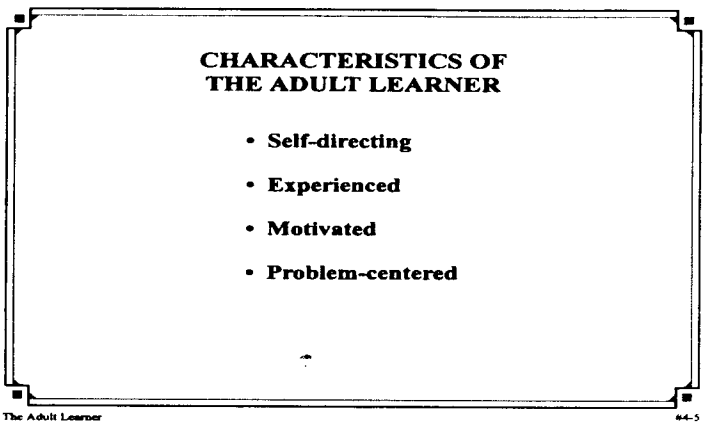
E. Activity 4.1—The Apple Exercise

This activity demonstrates how learning and the application of learning is impacted when you move from "real" examples to relatively "unreal" or "symbolic" representations of a concept or task. This activity also demonstrates that there are kinesthetic, auditory, and visual (and even olfactory) aspects of learning. Methods of addressing each area are covered in depth later in this lesson.

PARTICIPANT NOTES | *LESSON PLAN*

III. Adult Learning

A. Characteristics of the adult learner



1. Self-directing

2. Experienced

ADDITIONAL INFORMATION

III. Adult Learning

A. Characteristics of the adult learner

Instructing adult learners is very different from teaching children. Your role in instructing adults tends to be that of a facilitator/instructor. Unlike children, most adults enroll in classes or training with specific objectives in mind. Listed below are some characteristics of adult learners and how an instructor might deal with these character traits.

1. Self-directing

This means that learners are active in the learning process and are able to determine their own learning needs. They learn best by doing, like to be involved in planning and conducting the training (when possible), respond to a friendly, informal, adult environment, like to be informed of their progress, and can assist in the evaluation of their own progress.

As an instructor, you must be aware of learners' objectives for seeking training, be supportive, and provide feedback on their progress. Your instructional strategies should be interactive and hands-on.

2. Experienced

The adult learner has experience and wants to share it with others. This experience is anchored in emotional frameworks consisting of values, attitudes, and tendencies.

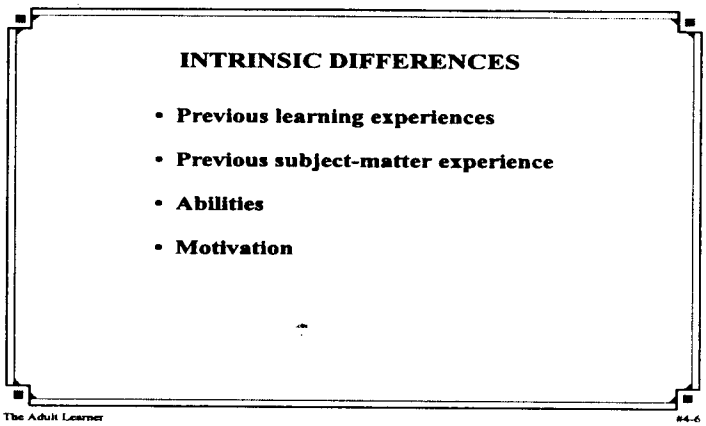
As an instructor, you should relate new material to your learners' experiences, encourage them to share their experiences, but monitor the number of "war stories." Also, facilitate students' learning from each other, and most importantly, remember that learning may be difficult because it can require change in long-established values, attitudes, and tendencies that are based on prior experiences.

PARTICIPANT NOTES | *LESSON PLAN*

3. Ready to learn-motivated

4. Problem centered

B. Intrinsic differences



ADDITIONAL INFORMATION

3. Ready to learn - motivated

   The adult learner is generally ready to learn (based on a need), wants to learn, will respond to a variety of instructional strategies, but may have very strong opinions or ideas on certain topics or content.

   Motivation is increased when the subject matter is relevant to the immediate interests and concerns of the student.

4. Problem centered

   Adults want to solve relevant, realistic problems, apply new information, and have the opportunity to discuss and solve current problems.

   As an instructor, you should provide realistic examples and exercises, and give students the opportunity to practice. Adult students learn best by doing.

B. Intrinsic differences

Each student will come to the classroom with a different set of experiences, values, biases, knowledge, and skills. These differences can be attributed to the following factors:

1. Previous learning experience

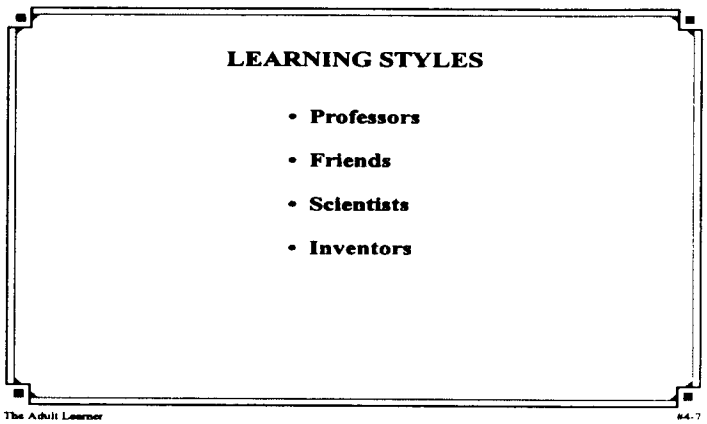
   - Level (high school, college, etc.)
   - Type (vocational, military, etc.)
   - Experience (positive or negative)
   - Outcome (better job, raise, or no change)
   - Value (viewed as worthwhile or useless)

2. Previous subject matter experience

   - Related vocational field (R.N., CPR instructor, etc.)
   - Related education or training (military, biology major)

PARTICIPANT NOTES | *LESSON PLAN*

C. Learning styles



1. Professors
2. Friends

ADDITIONAL INFORMATION

3. Abilities

   - Sensory (e.g., sight, hearing)
   - Cognitive (e.g., problem solving)
   - Psychomotor (e.g., mechanical aptitude)

4. Motivation

   - Genuine interest
   - Job or promotional requirement
   - Self esteem

C. Learning styles

In addition to intrinsic difference among learners, there are different styles of learning that as Instructors, we should be aware of. According to Garmston and Wellman there are some descriptive "personas" representative of the various learning styles.

1. Professors

The "professor's" goal is competence. This type of learner wants to master the information presented, so that he/she can recall it when necessary to perform tasks.

As an instructor, provide this type of student with facts, citations, examples, demonstrations, practice, detail, and feedback.

2. Friends

"Friends" want personal involvement and interaction with other participants. Their responses to topics are generally based on their experiences. Feelings and experiences are important to them.

As an instructor, provide group activities, real-world experiences and opportunities for students to share their experiences.

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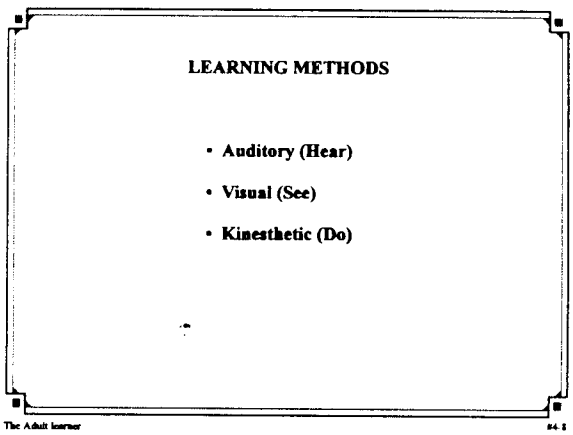
3. Scientists

4. Inventors

D. Learning Methods—Use Your Sense(s)



ADDITIONAL INFORMATION

3. Scientists

"Scientists" will reason with the information presented to them because they want to understand and comprehend. It must make sense. They also like structure and organization.

As an instructor, make sure your presentation follows a logical, organized sequence. Also, once you give students data, ideas, and concepts, give them the opportunity to analyze processes or formulate explanation or theories. Allow them to inquire.

4. Inventors

"Inventors" are creative. They like to adapt, reorganize, and explore new ideas or ways of doing something.

Inventors can be a real challenge for an instructor, especially when there are strict processes and procedures that need to be followed, as with the EMS technical courses. However, whenever possible or appropriate, try to provide inventors with opportunities, such as individual and group exploration or creative self expression, to tap their creativity.

It is important to recognize that the learning styles described above are not absolutes. Most people are a mix of several types depending on the instructional content and instructional setting.

D. Learning methods—Use Your Sense(s)

Learners can also be categorized according to how they prefer to have material presented to them. The three methods are auditory, visual, and kinesthetic. Some courses provided by NHTSA, such as the EMT-Basic Course, specify student activities for each lesson that are categorized by these three primary learning styles. Each method is described below:

- Auditory (Hear). These student activities provide instructional material in a verbal manner. Those students who learn best by hearing will benefit from this method of instruction. An example of this type of student activity is: Students should hear normal and abnormal airway noises.

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E. Activity 4.2—Learning Methods

1. Provide topics, or ask students to think of a topic they can teach.

2. Ask students to think of ways to instruct the topic using auditory, visual, and kinesthetic activities.

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- Visual (See). These student activities provide instructional material in a visual manner. Visual learners will benefit from this method of instruction. An example of this type of student activity is: Students should see breathing while an initial assessment is being performed.

- Kinesthetic (Do). These student activities provide instructional material in a performance manner. Those students who learn best by doing will benefit from this method of instruction. An example of this type of student activity is: Students should practice assessing breathing.

An example from the EMT-Basic Course is provided in Appendix B.

E. Activity 4.2—Learning Methods

1. Ask students to think of a topic they can teach (not necessarily EMS-related), e.g., water skiing.

2. Ask students to take 15 minutes and write ways to instruct the topic using auditory, visual, and kinesthetic activities.

   For example:

   Auditory

   - Hear changes in pitch of boat motor as skier is pulled up

   Visual

   - See equipment required
   - See correct posture demonstrated

   Kinesthetic

   - Practice putting on equipment
   - Practice correct skiing posture

3. Ask each student to read aloud his/her topic and activities to the class.

PARTICIPANT NOTES | *LESSON PLAN*

IV. Learning Tools

A. Study skills

1. Note taking

2. Underlining/highlighting

ADDITIONAL INFORMATION

IV. Learning Tools

It will be common for you to have trainees who have not been classroom students for a while. This can be a source of anxiety for many people, but through coaching (instructor role) your students, you can build their confidence through encouragement and guidance. Explain the use of the following study aids and test taking skills.

A. Study skills

Student materials provided with the DOT curricula will vary in quantity and level of detail. However, the following techniques can be used to improve students' study skills for any course of instruction.

1. Note taking

If students are not provided a course outline, they should follow the presentation structure, bulleting major topics and key points under those topics. If provided an outline, more extensive notes can be taken under the major topics and key points (if provided).

It is important that students DO NOT try and write down every word the instructor says. This takes their concentration away from learning the subject matter, and places it on writing notes.

As an instructor, you should be conscious of the speed of your presentation particularly when students have few supporting materials. Students will need more time to process the information presented and take notes. Deliver your material in small chunks, and make sure you allow time for questions.

2. Underlining/highlighting

When students are assigned outside reading or are following a presentation that has supporting materials, underlining or highlighting is a very useful learning tool. Students can indicate quickly what topics or points are important with little disruption of their cognitive processing of the presentation.

Highlighting important information in videos can be accomplished by mentally picturing yourself performing the skills and drawing the critical elements.

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3. Outlining
4. Summarizing
5. Recording devices

ADDITIONAL INFORMATION

As an instructor, help your students by noting important topics or key points. Your students are there to learn. It should not be their job to figure out what you feel is important.

3. Outlining

If student materials are not provided, a helpful technique is for students to review the notes they took in class, then develop an outline. This requires students to go over the presentation in their minds, then arrange it in a logical order. This process helps students identify areas of misunderstanding or particular importance.

4. Summarizing

Whether student materials are provided or not, it is always a good idea for students to summarize a presentation or lecture. Again, this requires students to reflect upon the presentation, review their notes, then describe what they have learned in their own words. Written summaries, as well as verbally discussing the material or reading aloud the information you want to remember are all effective summarizing techniques.

As part of the summarizing process, both instructors and students should tie in new information with what has already been learned. This provides mental "hooks" on which information can become more firmly attached.

5. Recording devices

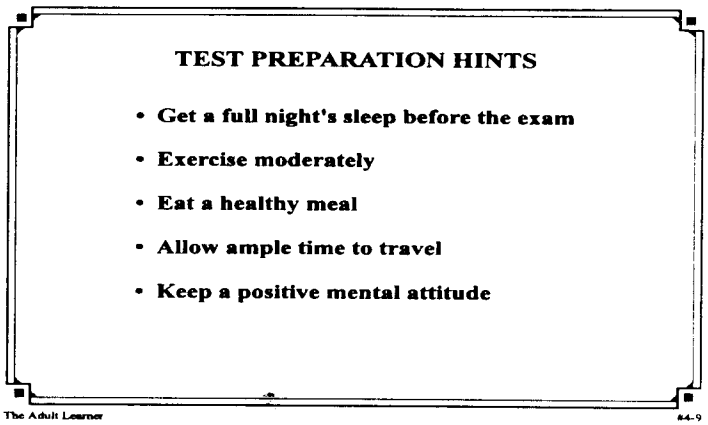
Students may request to record your classes/lectures. This is common practice on college campuses, but an instructor must give his/her consent to the taping.

For students who need to pay close attention to lectures, but also need to take detailed notes, recording lectures is an excellent option. He/she can become an active participant in the lecture, then re-listen to the lecture for the purpose of taking notes. Another advantage is being able to listen to the tape while traveling. If a student has a long commute and little time to study, listening to lectures can be a way to make the time more productive.

PARTICIPANT NOTES | *LESSON PLAN*

6. Study environment

B. Test taking skills



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As an instructor, you must decide if you will allow students to tape your classes. In general, it is not a problem. However, be aware that you can be held liable for what is on the tapes. Additionally, if you feel taping will change how you deliver your course, or make you feel uncomfortable, you may want to choose not to allow it.

6. Study environment

The best studying is accomplished in a comfortable place, free of external distractions. It is best to set up a regular study schedule, preferably at the same time each day for a specific period of time. Studying with another student who is doing well in the class is recommended. Study for short periods of time with frequent rest breaks. Short, frequent study periods are preferable to marathon sessions. Last-minute studying is not recommended!

B. Test taking skills

Adults, just like children, are subject to test anxiety. Ensuring the best possible test scores is the responsibility of both the students and the instructor. The instructor should not make tests a "taboo" subject. Inform students how they will be evaluated, when evaluation will occur, and what content the evaluation will cover. The subject matter on a test should not be a secret. If an instructor has not addressed evaluation, students should raise the question. The second part of the equation is that students are responsible for their knowledge of the subject matter. Memorization techniques (mnemonics, mental imagery, self-recitation, relating, etc.), simulated practice, and study groups are all techniques that can improve evaluation scores.

Other test preparation hints are as follows:

- Get a full night's sleep before the exam. Your body needs to be rested for your brain to function at peak capacity.
- Exercise moderately prior to the test. The activity will increase your cardiovascular status, thus increasing the blood supply to your brain.
- Eat a healthy meal. Do not eat a heavy meal within one hour of the exam.

PARTICIPANT NOTES | *LESSON PLAN*

V. Summary

References

ADDITIONAL INFORMATION

- Allow ample time to travel to the testing location. When you have arrived, take a moment to collect yourself by taking several slow, deep breaths through your nose and slowly let them out. Try to relax all of your muscles.

- Keep a positive mental attitude toward yourself. Close your eyes and say to yourself, "I know the material. I will do well on the test." Never say to yourself. "I don't know the answer." Your brain's capacity to search and retrieve information can be clocked by negative thoughts.

V. Summary

Learning is a lasting change in behavior. Different learning theories propose different explanations for how and why learning occurs. Instructors need to be aware of the various characteristics and learning styles of adult learners in order to design effective instruction. It is also incumbent upon instructors to provide their students with tips on learning tools that help facilitate their study and test-taking skills.

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